

The progressive bee-keeper. Vol. X, No. 2 Feb. 1900

Higginsville, Mo.: Leahy Manufacturing Company, Feb. 1900

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FEB., 1900.

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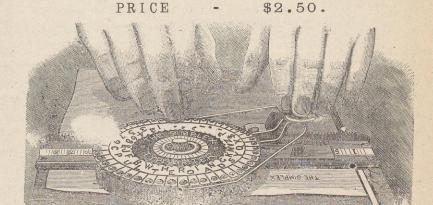
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stroke is made.

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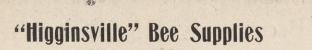
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The A. I. Root Company, Medina, Ohio.

N. B.-Watch for our announcement next month.

The Progressive Bee-Keeper.

A Journal Devoted to Bees, Honey, and Kindred Industries

50 Cents a Year.

Published Monthly by Leahy Manufacturing Company

Vol. X.

HIGGINSVILLE, MO., FEB. 1900.

No. 2.

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TRULY FEMININE.

The snow on tiptoe softly crept. To garb the world while mortals slept, And gently as the dew of May, Hid nature's divers scars away. And whirled in drifts along the fence, Unsullied, type of innocence, While sundry angels gazing down. Half-envied earth her loyely gown.

-Will Ward Mitchell.

Good Things in the Bee-Keeping Press. Somnambulist



For about two weeks we have been enveloped by a veiling of

mists. Nature has been indulging in a vapor bath. I have read of fogs that could be felt, London fogs, etc., and here arose the question if old Mizzurey was trying to be "English, you know." The daylight is very much curtailed, while this vapory atmosphere lends a mysterious air to all things visible as well as renders things at quite short distances invisible.

Just so is bee-keeping looked upon by the uninitiated. To them it
is shrouded in mystery. Hence,
such ideas as rapping on the hives
to announce the death of the master, holding mirrors beneath absconding swarms, with a view to
controlling them, and many other
equally as ridiculous notions. To
this very characteristic the birth of
many a bee-keeper might be attributed, for a curiosity box in all grades
of mankind, is no uncommon
find.

What a contrast our weather presents to that of Ohio, as reported by E. R. Root, in Gleanings, towit:

"We are having good stiff winter weather; and if it should continue long, it would be rather hard on outdoor bees."

And here permit me to state that as for shedding light on befogged subjects, disentangling knotty problems, and eliminating seeming inconsistencies and discrepancies of bee-keeping, Gleanings has no superior.

Dr. Miller; the straw man, -beg pardon, that's not what I started out to say. That expression reminds one of that time-honored personage of childhood days, known as "Old Scarecrow." The man of strawsthat's but little if any nearer to the point. Oh, yes; here it is: The famous gleaner of "Stray Straws," not chaffy straws carried hither and thither by the wind, but straws the weight of which secures them a place in his sheaf, cleverly starts a ball to rolling, and E. R. Root closely follows. They understand each other and their business. Here are a few specimens from which the readers of the Progress-IVE can judge for themselves:

"W. H. Pridgen succeeds in giving a just-hatched queen on the same day on which the old queen was removed. Friend Pridgen, if you take a queen just hatched, one that has not been held in her cell, and put her in a hive where there is a laying queen, I think you will find that she is ALWAYS kindly received without the removal of the old queen. The trouble comes when she attains a little age, perhaps a day or so old, when she begins to assert herself as a queen, at which time the two will no longer be tolerated under the same roof. [Correct, according to my experience.—Ed].

"During the honey-flow, when breeding is heaviest, bees require most water," p. 922. May be so in some places and conditions, but the reverse is the rule here. When a heavy flow comes, the watering places are largely deserted, and when you see bees again at the water, you may count the flow is letting up. I suppose they get enough water for their needs, in the nectar. [Yes, doctor; but is it not true that when bees are breeding heavily, they require the most water, irrespective of WHERE or HOW they get it? And yet I think you are right in saying that the bees gather most water when the honey-flow is not on, especially when brood-rearing at such times is at its height .- Ed.]

W. A. H. Gilstrap, p. 928, puts the annual consumption of honey by a colony of bees at 100 or 200 pounds. I think Doollttle puts it at 60. Quite likely it may be 40 pounds less in New York than in California, for in New York bees are nearly dormant for months. Pity we can't know somewhat definitely about it. [As you intimate, it all depends on where one

lives. In Florida, and, in fact, nearly all of the Southern States, where the winters are more or less open, and the bees can fly every day, the consumption of stores is very much greater than in the North, where the bees go into their long winter sleep.—Ed.]

L. Stachelhausen raises a fresh question, p. 925. He says the bee begins field work when it is 18 days old. Tradition says 16. He also makes 34 days the life of a worker. Tradition says six weeks-eight days more. Mr. S. is a man who generally knows what he is talking about. Has he good ground for thus lightly treating the traditions of the fathers? [While there is a slight discrepancy in the actual time, yet they are near enough when we consider the influence of various conditions and localities. I could readily see that in Colorado, for instance, the average life of the bees would be shorter than here, for the reason that their honey seasons are much longer. Would not this alone explain the difference in the life of a worker?-Ed.]

I am obliged to say that one of the things that I know, if I know anything about bees, is that, while there are conditions that will make the same colony produce sections whiter at one time than at another, the chief difference is in the colonies themselves. I had some Punic or Tunisian blood among my bees, and those bees at any and all times made greasylooking sections, no matter how white all the other bees were working. They were good gatherers, but their product brought 2 cents a pound less than the rest of my honey, so I couldn't afford to let their queens live. Last season No. 70, from first to last, made sections distinctly whiter than any other colony, although the material and conditions seemed the same for all. [Yes, I remember very distinctly that the Tunisian bees that we had made the greasiest-looking comb honey of any bees we ever had-greasy because they daubed it all over with propolis, giving it somewhat the appearance of honey that had been badly soiled .- Ed.]

Prof. Gaston Bonnier made some exhaustive experiments, and found that, under precisely the same conditions in other respects, the difference of soil made a notable difference in the nectar of plants. WHITE MUSTARD GIVES MORE NECTAR ON CALCAREOUS THAN ON ARGILLACEOUS SOILS, WHILE BUCKWHEAT IS THE REVERSE. A GOOD HONEY-PLANT IN ONE COUNTRY MAY BE WORTHLESS IN ANOTHER. [Exactly so. Buckwheat is a reliable honeyplant in New York; but in this state it may or may not yield. Alfalfa yields immense quantities of honey in Colorado and Arizona, but so far as I know it has not distinguished itself in the east-partly because so little of it is grown. But did you ever know of a place

where sweet clover would not grow, and where the bees did not work on it when in bloom? It grows, and yields honey in more states of our union than almost any other honey-plant that is known, I believe; BUT IN ONLY A FEW LOCALITIES DOES IT YIELD ENOUGH TO MAKE A PERCEPTIBLE SHOWING IN THE SUPERS.—Ed.]

Keep it before the bee-keeping public, Missouri is one of the "few." Several years ago, before the praises of sweet clover had been so publicly sung, an aged bee keeper, apparently in a great rush, came after super supplies, (nothing strange about this except that it was at the close of the white clover season). In vain I tried to convince him he would scarce have need of them.

"Our main flow is over," I stoutly maintained. But with a fixed purpose in his eye, he as stoutly affirmed that he knew a thing or two. His eager, earnest manner startled me. In a spirit of sport, a few of my fun-loving acquaintances were wont to give vent to their surplus sarcasm by intimating that most generally bee-keepers were a little light in the upper story—in other words, were affected with a mild, though peculiar, form of lunacy. I began to seriously question if this was a living object lesson along that line.

"Your main flow no doubt is at its last end, bidding you adieu, but my best is to come, in fact, is just greeting me." With a distance of but six or seven miles between us, what could this mean? Poor old man! There could be no doubt but that his mind was wandering, and my warmest sympathies aroused only to be wasted, not exactly on the desert air, but far worse. "You see I am old and infirm, physically unable to farm, (and that doesn't imply that I am otherwise able,) so I tried the experiment of seeding eighty acres down to sweet clover, and that is the reason I find myself in need of so much room for surplus." In a twinkling I saw the useless expenditure of sympathy. Alas! it had been going the wrong way.

Stenog., in quoting from and commenting on Bee Chat, an English sheet edited by Samuel Simmins, offers this advice:

"Before buying discarded apiaries, it is best to make a personal examination. Disregard of this precaution has just led to much acrimony between some of Mr. Simmins' friends, and their letters were so intensely personal that he could not print them. He well says, 'It is sad to think what mischief is often done through want of thought'."

Certainly, "sight unseen," trades' tricks and knee-pants should be abandoned about one and the same time.

"As between foreign and native bees, a correspondent says the latter are nowhere in the race. He had nine foreign stocks in one group, and another man thirty natives in another, on the same ground. He called his neighbor to look at one of the supers, when the neighbor said, 'I have nothing like it,' while he himself had several as good. One black stock with a younger queen completed only one section. The natives would not touch foundation, which the yellow race drew out freely, and he finds that the latter maintain a larger population in fall. He finds an Italian queen mated with a Carniolan drone better than any other."

Yes, the Italians evidently feel that "there's no place like home," if we may judge from the manner in which they always provide for their brood nest. In a poor season, how many times we find the blacks with their "little all" stored in the super, while the Italians have carefully guarded their diminutive fort by placing the food within easy reach.

J. F. McIntyre handles his article on "Superior Breeding-Queens" in a way that plainly indicates he has "been there." As a majority of us have met defeat in the purchase of queens, perhaps the reasons he advances will find general acceptance. He says:

"I have never advertised queens for sale, but have bought queens from every breeder in this country who claims to have anything superior, and I am sorry to say that I am generally disappointed. Why is it that we are so often disappointed in buying the daughters of a queen claimed to be very superior stock? These daughters should be all that is claimed for their mother, and we are disappointed if they are not.

There are several reasons why the young queens may not be as good as we expect from reading the advertisement. First, the claims may be exaggerated; but I have charity enough to think that this is not where the

trouble generally comes in.

Second, The young queens may not be as well reared as their mother was. I believe this is true in about ninety-nine cases in one hundred. We find a very superior queen in the apiary, probably raised under the superseding impulse, and start out to duplicate her by starting a large number of cells from her larvæ in a queenless colony, or in a super above a queen-excluder, which is about the same thing, as the bees regard that part of the hive as harmless; and the result is a lot of queens below the average in quality. To duplicate your fine breeder, the young queens must be reared as close to nature's best way as possible. The Doolittle cells placed in the middle of a brood-chamber, where the colony is superseding its queen, or preparing to swarm, gives the best results in my hands, and the superseding colony is the better of

the two.
Third, The young queens may not have married as well as their mother, and their children may inherit a lazy disposition from their father. As in the human family, this is a hard matter to control, but it is best done by raising an abundance of drones from an equally good queen in no way related to the one you rear queens from, and by killing inferior

drones

Fourth, Queens are often injured by long confinement in the mails, especially if they are laying rapidly when caged and shipped. When a queen comes out with a swarm, she is in the best possible condition for a long journey by mail. The ovaries are then small, and not so liable to injury as when they are large and full of eggs.

Larger cages should be used for shipping

valuable breeding-queens."

The foregoing clippings are all taken from Jan. 1st Gleanings. In Jan. 15th number, Dr. Miller adds this paragraph to the subject of queen-rearing:

"It is encouraging to note that a number of bee-keepers are beginning to be on the lookout for improvement in bees. If every beekeeper would breed only from his best, both queens and drones, a general improvement would soon be manifest. And while effort is made in that direction, the probability is that the greatest improvement will come here and there from some sport, as it is called—some colony that specially distinguishes itself from its fellows with no apparent reason for the distinction. So it becomes us all to be on the alert."

By the way, on the display plate or card announcing "Stray Straws," the same are represented as being gathered by birds. Does this indicate that our jolly old Friend Miller is a "burrid?"

From British Bee Journal, Stenog. clips:

"Here is an account of what is probably the oldest honey-comb in the world. The story, which seems to be entirely accurate, was in a Cambridge paper:

'There is in the possession of Mr. W. Drake, of Broad street. Cambridge, a curiosity of great antiquity in the shape of a perfect honey-comb in the center of what was once an oak tree, which according to naturalists who have viewed it, is hundreds of years old; in fact, it is impossible to say what age the comb and tree may not be. The tree was raised on land in the occupation of Mr. Gale Cornell, of Brick-kiln Farm, Bottisham Lode. It had been known to be imbedded in the fen land for a long period, and when 6 ft. of peat had been taken off the surface, it was decided that the tree, which is of the species known as bog-oak, should be raised. It was found to be no less than 100 ft. long, and the men were in the act of splitting the tree into logs when, in the center of it, they came upon a honey-comb, which, with the oak, had been imbedded in the peat. The comb was in a perfect, state of preservation, and dotted about it and lying at the base of the aperture were bees.'

'Peat cages' are nothing modern, after all-It would be interesting to know when bees were first seen in England.

A picture of an old-fashioned apiary is given, consisting of five straw hives, owned by a Mrs. Booth. The apiary was started by her great-grandfather over 150 years ago, and has been run ever since without interruption, always on the female side. Talk about "simplicity" and Excelsior covers! This good lady uses old earthenware pannings, too much broken to be of use; old bottomless metal coal-scuttles supplemented by worn-out straw skeps, broken tiles, a box on edge. old sacks, rusty dripping-tins, pudding-pans, etc. It is good that an occasional relic of this kind has been preserved."

Rambler shows up the vast honey resources of California in quite a

tempting light, and in giving advice to the emigrant, none of it is better than that found in these few sentences:

"When a location is selected, it is of the utmost importance that the occupant of it make up his mind to like his new home, and laud it to the skies upon any and all occasions. That is always the first duty of all true Californians.

l am sorry to know that some people are always cursing their lot and their surroundings. Well, we want no such people here. Their somber souls would be sadly out of place in this God-given land of health and sunshine, and wherever a number of such people congregate, there you will find a dead town and a well-filled graveyard."

That is just my way of thinking, and it has just occurred to me perhaps a few hard facts concerning Missouri might be relished, so here they are in plain, every-day clothes; no silks, satins or laces, no birds, feathers or flowers, no garnishings, flourishes or fol-de-rols, but simple, unvarnished truths:

Ranking generally as the fifth in the galaxy of our great American commonwealths, Missouri easily stands first when considered as an independent producer of all things necessary for the happiness and comfort of man. Missouri is first in poultry, and first in mules. not only first in zinc, but produces more of it than all the other states combined. In area, Missouri equals the combined areas of Maine, Massachusetts, Connecticut, New Hampshire, Vermont. Rhode Island and Delaware, with still nine hundred square miles to spare. Missouri has the largest available public school fund in money of any state in the union. Missouri stands third in the number of its farms, and third in the number of acres in improved land. In the city of St. Louis, Missouri possesses the third manufacturing city in the United States; and in Kansas City, the second live-stock market in America. Missouri has no earthquakes nor desert lands, but is abundantly supplied with springs and streams furnishing unlimited water power, and at no distant day these vast water powers will be turning the wheels of hundreds of industries. great plains of central and northern Missouri are as rich in alluvial deposits as are the bottom lands of The hills of the the Mississippi. south are the natural home of ples, peaches and grapes, and this region is fast becoming famous, not only at home, but in foreign countries, for its magnificent and certain crops of fruits. The prospects now are that in the near future Missouri will be one vast vineyard, apple and peach orchard. Small fruits must not be overlooked, as the fame of the Sarcoxie strawberry region attests. Missouri is capable of supporting ten times the number of people as are now within its borders, and all honorable people of whatever creed or clime, are invited and will be welcomed. Come and test the matter, and see if Missourians do not extend to you that bright cordiality which bespeaks a common brotherhood.

Naptown, Dreamland.

COMMENTS.

F. L. THOMPSON.

"Why was it the Heddon hive was smothered? why have its merits been kept in obscurity?" asks Mr. Culley on page 338, November Progressive, and says if I tell why, he will answer the question why he did not give credit to Mr. Heddon in his article. If we do not look out, this will lead to that same unnecessary tangle of assumed motives which Mr. Culley deprecates further on. I therefore state, first, that the plain simple idea I had in

mind in asking my question was that Mr. Heddon has so identified himself with the exposition and interpretation of the principles of the divisible brood-chamber hive that it is mere justice, not courtesy, to mention his name in connection therewith. If this idea is a mistaken one, let it be refuted on its own merits. It is a question of in-

formation, not permission.

Answering Mr. Culley's question just as simply, but INDEPENDENTLY of the other, I cannot tell why the Heddon hive was smothered, for I don't know-not familiar enough, for one thing, with former bee literature. My notion is, that it was for the same reason that the Given press, or an equivalent, was discontinued, and for the same reason that certain new fixtures have lately been puffed; namely, a lack of judicial balance on the part of those whose position enables them to dictate, to a large extent, the form which supplies take. The proofs of this implication I will add to later. I have already given some of them.

Mr. Aikin correctly infers (page 328) that I wanted to draw him out. I admit my remarks were not as straightforward as they might have been.

Somnaumbulist on page 323 carefully ignores my implication that the ideal treatment (simplicity) is itself commendation of the highest order, being the recognition of a man for what he is. It is scarcely necessary to say I am, and always have been, keenly alive to this sort of appreciation. But the very essence of it is spontaneity. Let mé suspect that the giver of a compliment bestows a fraction of the thought upon it that he should feel for the service for which the compliment was made, and its flavor is deadened, if not nauseating.

Yes, Somnambulist, words of commendation are most emphatically indicative of some lurking weakness being possible or probable.—I will not say certain, but "probable" is reason enough for being very careful in this regard. We are creatures of habit, and it is so easy to make blandness do duty for spontaneity, and then fall into the habit of taking to ourselves a vast amount of credit for words, not deeds or attitude. Besides, gross flattery is so cordially detested in common life that I am surprised that Somnambulist overlooks the excess that does exist, and brings a blush of shame to the cheek of the recipient at being thought so meanly of as likely to respond to such coarseness. tain things difficult to define are recognized among refined people as constituting good taste; and if there is one thing more true than another it is that the tactless, pointless praise to the face, for things which are a matter of course, and no more than one's duty, is not in good taste; especially when the performers of this doubtful service have the impudence to claim the reward of exemption from criticism. W. F. Clarke suggested some years ago that there was considerable "you scratch my back and I'll scratch yours" in our papers, and this elicited vehement protestations—a little too vehement, in fact-but he was right. By not conceding the existence of what everyone knows is true, Somnambulist spoils his only respectable argument, that of the great difference in people, in stretching it to cover more than it possibly can, Fie, Somnambulist; look on the naked truth.

Mr. W. P. Root, in Gleanings, ought to be hauled over the coals by Mr. Doolittle—he doesnt know when to stop. Having spoken of the 'light esteem in which Mr. Thomp-

son holds all rules concerning spelling, punctuation, prosody, or syntax" (the implication of which statement is false, and the writer knows it), he attempts to dodge the manifest interpretation by saying that his closing remark "But it's a fortunate thing for us that Mr. T. (hompson) is very well qualified to act as an independent worker, even if one cannot indorse all he says" makes "the highest praise" out of the whole thing, and says in injured tones that I call it "mud" and "taffy!" To be sure. That's what it is. Let the reader decide. But what I want to call particular attention to is his whimpering at that language "IN SPITE OF this and what I [he] said of him [me] on pages 80, 255, 367." I havn't looked up those references, for it is not necessary. The argument is, a few compliments do away with the necessity for making just and exact statements. Proofs for that nonindorsment, please, and let the taffy "Katy did! Katy didn't." Would it not have been better to have been plain and exact in the first place? And of what profit to the reader was the first paragraph, even supposing it was true? The whole is an excellent illustration of what is a rather prominent fault of our discussions-assertions without proof. Of course, when the assertion is made, the proofs must be called for. It would save space, if it did nothing else, to bring them forward in the beginning. Let no editor foot-note this with "We be brethren." The most effective way to promote the brethren idea is to imbue all with an enthusiasm for the truth, the whole truth, and nothing but the truth, so that no one shall feel so immensely superior as to scatter proofless assertions.

Utah seems to be two-thirds desert and one-third mountains, with a

small fraction of rich, well-watered, way-back-east looking mountain vallevs (including those of Salt Lake and Utah Lake), where the orchards are old and the farms small and irregular and the roads and lanes a tangle and the trees and shrubbery numerous and thick. A few oases in the desert, formed by the widening of river valleys for a few miles, are to be added. One of these is at Vernal, in Uintah county. I saw two partners in the bee-business from there, Messrs. Richens and Christensen, and obtained some reliable information. The valley is about eight by twelve miles, and the only sources of honey are alfalfa and sweet clover, as elsewhere. The product last year was between four and five carloads, of extracted honey only, on account of the rough road of 125 miles over which it must be hauled to its shipping-point, Price. Mr. Christinsen says the locality is pretty well stocked. uses the American hive, and thinks he has conclusive proof of its superiority in wintering.

I also saw the man who has the most bees (100 colonies) in the Moab valley, in Grand county. His name is O. H. Warner. He has large fruit interests, and wants some one badly to run his bees on shares. He says an average surplus of 150 lbs. of extracted or 100 lbs. of comb may be looked for. Besides the alfalfa and sweet clover are quantities of a variety of cleome with a yellow blossom. I did not feel tempted, however, as the distance to the shipping-point (Thompson Springs) is thirty-four miles, over a rough road, and there is only one specialist in the valley, who has but recently started, so that shipments would probably have to be made by local freight. Mr. Warner says, though, the home market, among the La Sal miners, takes all

the honey produced, at 10c. a pound for comb and 8c for extracted.

I followed the Rio Grande R. R. track with a bicycle, breaking down near Thompson Springs; but returned the whole distance from Salt Lake to Montrose on the bicycle. The desert is not sandy as a rule, but an adobe soil that would be fertile if it had water. It has no grass, but shad-scale, a very small shrub, grows everywhere, though sparse and stunted. In some places also salt-weed, greasewood, chico. It has a shapeless sort of surface—up and down, up and down, all the time, with little washouts every now and then. A long barrier of barren cliffs to the north, a wilderness of adobe bluffs in many places, cut up in all sorts of shapes by the infrequent, but heavy rains, that immediately run off without soaking in, then vast expanses of irregular rolling surface, and far to the south the group of the La Sal mountains, making a landmark for a hundred miles of the route-such is the scene for about 160 miles between Fruita, Colorado, and Price, Then comes the Wahsatch range of mountains. On their eastern slope, about Castledale, some honey is produced, a carload of extracted being shipped last season. The mountains, sixty miles across, are like the Rocky mountains on a smaller scale. Then come the large valleys of Utah Lake, Salt Lake, and beyond. In these regions the principal bee-keepers are located. There is much sweet clover here, and the honey tastes differently from our Colorado honey, probably on that account. The comb honey is almost always clean and white, whether early or late, owing to the absence of the red propolis which stains sections and combs. eight-frame hive is generally preferred. One would need to keep

bees both in Utah and Colorado to know why, but I suspect the cloudy winters, causing less consumption of honey, and possibly spring flows, perhaps from the old orchards, have an influence. Honey is not looked for from the second crop of alfalfa; just why, I could not make out, but the sweet clover continues the flow until fall.

At the Utah State Convention on Oct. 5 the complaint of weak, dwindling and dead colonies was general. Mr. Dudley had bought a large apiary of box hives in the spring, which so far had been an expense, and many died. Mr. Cornwall, who every year has paralysis among his bees, commencing the middle of August and lasting five or six weeks, reported that it occurred as usual this year, and he would have to double up-for winter. In a belt of land twelve miles long and two and a half wide only one bee-keeper succeeds in wintering his bees. This strip is in line with the smelters, and Mr. Cornwall lives at the edge of it. In Salt Lake County dwindling commonly occurs in the fall, and smelter smoke is considered to be the cause, Ten miles north of the city, at Bountiful and beyond, there is no trouble in wintering.

What the Utah bee-keepers call pickled brood is quite destructive Mr. Bouck told me he would rather have foul brood than a bad case of pickled brood. I doubt whether it is pickled brood, however, and suspect it is the same dead brood that some of us at Montrose noticed all through the combs last season, which in turn seems to like that of which New York is complaining. This Utah brood was not described to me Dr. Howard has described that which he gave the name of pickled brood.

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EXPERIENCE AND ITS LESSONS.
 R. C. Aikin.

(Continued from Jan. Progressive.)

CHAPTER XXIII.

MANAGEMENT TO CENTRAL SWARM-ING— TO REDUCE SWARMING TO THE MINIMUM.

I will continue the review of "Experience and Its Lessons", and again touch the swarming problem. I find in looking over Doolittle's comments, that he thinks I did not make clear how I prevent swarming.

I will first discuss methods I employ with L frame hives. I have a hundred chaff hives calculated for 9 L frames, but I use generally 9 frames and a dummy, or frame filled with a board instead of comb. Sometimes I use simply 10 combs, other times 8 combs and 2 dummies. The variation in the number of combs is because of some colonies having more brood than others, though I prefer to have at least one dummy in each hive because it is so much more easily removed than a comb to manipulate brood combs.

My location being devoid of nectar and pollen in sufficient quantities to induce swarming before the main flow, I do not expect any swarms except from some colony

that may be superseding, or rare cases where the colony is strong and have much old stores. As I keep very few queens over 2 years old, there are few supersedures, and the regular swarming is indeed very limited, hence I have very little to do in the prevention of swarming until about June 15th to 20th.

One of the first things to do is to have no aged queens to be superseded. Should there be much stores some may swarm though no nectar is coming in and to avoid this I take away part of the stores. It is a critical time to have a colony short of stores, so care must be exercised that they do not get too short. If the colony is constantly drawing on the old store they should never have less than 1-2 an L frame full of honey—a strong colony brooding rapidly and NOTHING coming in can use a half comb of honey in a very few days.

Heat, together with nectar from the fields, being prime factors to swarming, I keep the colony well ventilated when strong, and carefully watch the matter of stores. In this way I have no trouble about swarming till the flow starts, but the flow on, the matter is altogether different. You see I can have strong colonies and they just loaf around if the nectar is absent, but add the nectar, and heat, and if your colony is crowded they will begin to swarm in about 6 to 10 days from the coming of the nectar.

I always like to have bait combs, and my unfinished combs are used in this way, putting more or less of them into each super of the first round. Each colony strong enough to occupy a super is given one just before the flow begins if I can anticipate that time, and I usually can, preferably a week before. These supers having the bait combs will attract the bees to them, and if bees

are in the super when nectar comes it will begin to go into the baits, and once honey there they begin to draw the foundation in the other sections. I prefer to use full sheets of foundation in the first supers in all sections not having combs in, for foundation is the next best thing to a bait comb to get the super work STARTED.

Every colony I can get started promptly in the super, I expect such to delay swarming for several days. If my comb honey colonies are not so numerous but that I can keep pretty close watch of them, I sometimes look through the brood chamber in about a week after the flow starts. I usually find a considerable portion of the colonies have not started cells at all, and such will very often not attempt to swarm if the flow is good and I can keep them stretched, (drawn largely to the super) so that the bulk of the force is in the super; the most of the bees being above, the center of activity is in the sections and the queen goes right on laying below.

As I have before stated in this series of articles, the problem is to get a large force of bees IN THE SUPER or supers. The thing of all things to get a large force in the sections is STRONG COLONIES because if there are so many bees that they must get above or on the outside, they will go above if there is work for them to do. Do not forget that the strong colonies are the ones that will want to swarm, and they must be kept comfortable, must not have too much honey before the flow, and must have room just as soon as needed, and it is needed with the strong colonies the very day honey comes in fairly well. I will put the matter again, for so many overlook SOME points and then say the doctors

disagree.

(a) Strong colonies, hot weather and sufficient old stores to supply the immediate needs of the colony and no nectar from the fields, and you have little swarming.

(b) Add to this field work and fair supply of nectar, a fair living, and you have some swarming, the swarming just about in proportion to nectar gathering, the other con-

ditions being equal.

(c) Take away ALL old stores and let the colony get just a bare living, and you have just a trifle more swarming than as indicated in (a).

(d) Plenty of old stores, colony strong, (brood chamber full of bees and brood,) nectar from fields in fair supply, and warm weather,

brings swarming.

At all times during the early part of the season up to within a week or two of the flow, let all colonies have PLENTY of STORES and EMPTY COMB, but as the flow nears, have the colony in a state of semi-starvation, as Hasty calls it, just enough honey to tide over 4 or 5 days of stormy weather, and they won't get the swarming fever. In this condition a fair amount of brooding goes on, but it is not a time you care for heavy laying for the laying that gives the force for the flow just ahead was done weeks ago, the bees to be had from the laying just before the flow comes, emerge after the flow is well nigh or entirely gone. I accomplish this "semi-starvation" condition by equalizing stores, and by taking from those having too much, and giving to weak or nucleus colonies. Those who practice swarming can give the surplus combs of honey to new

Having brought the stock to the honey flow and kept down the swarming fever, if all are not quite strong, I select the stronger for super work, often making medium ones strong by doubling in some way,

sometimes by adding bees, brood or both. Bees may be added by removing a close neighbor hive to a new stand, allowing the fielders to go to the nearest one left, and by shaking off bees from combs of the removed hive.

The flow started and the conditions favorable to swarming, for complete and practical control to reduce to the minimum I use bait combs and full sheets of foundation in supers, making the colony so strong they must go up or out, thus get so many bees in the super that there is as much or more doing in the super as in the brood chamber; this accomplished, swarming is brought to the minimum.

The reader getting the foregoing principles clearly in mind, you can do much to control the bees; but a light honey flow before the main one may upset much of your planning. I seldom (here) have the upsetting earlier flow, but if I did I would give larger brood chambers so the colony could spread DOWNWARD till just as the flow begins, when I would remove such brood room as is not needed and push the bees to the sections as already indicated. Those locations and seasons favoring swarming conditions by nectar and pollen gathering BEFORE the flow proper, must expect to have more swarming or get their non-swarming methods elsewhere. I know of only one sure method when producing comb, and that is the unqueening system, and it does not suit all localities and seasons.

When producing extracted, the foregoing methods are O. K., but the putting on of the extras early is a grand help, so much so that it is scarcely worth while to go to near so much bother. The method I prefer after the flow has begun (IMMEDIATELY AFTER), to keep full control, is to have extra brood chambers

with dry combs and put one under each colony for the colony to work down into. Putting the dry combs under, the queen will use them freely for brooding, and my experience is, that the bulk of the honey goes to the extra just the same. It is important that stock run for extracted have larger brood nests than those run for comb, because the comb honey stock will crowd the brood-chamber, while that for extracted will often put nearly all in With divisible broodthe extras. chamber hives, this is easy to accomplish, giving what room is necessary, and just the same is true as to comb honey colonies. I often reduce the comb honey colony to so little brood that they will not swarm only with divisible hives.

Loveland, Colo.

Recapitulation by G. M. Doolittle.

Dummies.—Bro. Aikin tells us in the beginning of this article that he uses, or has 100 hives in which he can use, ten Langstroth frames, but that he usually keeps nine frames in these hives, and one dummy. Then he tells us that his dummy is made by filling a frame with a board instead of comb. This is all right, but for a dummy I prefer a board as long as the hive is wide, less one-fourth of an inch at each end, and as wide as the hive is deep below the rabbets, less one-fourth inch at the bottom. To this I nail the top-bar of a frame, when it will hang in the hive the same as a frame, but fits a little closer to the sides and bottom of the hive than a frame with a board in would, costs less work to make, and saves the side and bottom material for the frame, which is generally of better stuff than that in the dummy board. Of course all of this is of minor importance, but it is always well to know how to make a thing as easily and cheaply as possible. The main point I

wish to emphasize is the dummy. If any have never used such, they have been missing one of the very best things used in connection with any bee hive. Like A., I generally keep one dummy in each hive, except with queens which are very prolific, one which will keep every frame in the hive full of brood. When I find such a queen as this, the dummy is taken out and a frame of comb substituted for it. But it is far more often that I have colonies with queens which will not keep more than six or seven L. combs full of brood, than those which keep the whole ten full. Well, no matter what the number of frames is that are well filled with brood, the point is, that when the honey harvest opens, if we would meet with the best success, we will take out all of the frames having no brood in them, and put in their places dummies. to the number of frames we take out. In this way all of our colonies, those having very prolific queens, and those otherwise, will give us a yield of section honey in proportion to their numbers, while did we not do this, the colony whose queen did not keep more than five combs occupied with brood, would give us no section honey, and thus we would practically lose the use of that colony that year. After the honey harvest is over, all of these unprolific queens should be superseded, but I have found that much better results can be obtained by leaving her and contracting the frames to those having brood in them, than can be done by superseding her just before the harvest. Now, dear reader, if you have never used any of these dummies. please go and make a few for next season's use, before you do anything else. for I believe it will pay you better than anything else you can do in the same length of time.

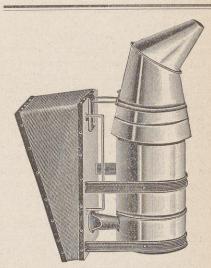
Anticipating the Flow of Nectar.— Reader, did you notice that point of anticipating the flow of nectar as touched upon by Bro. A.? Well, right there is

one of the nice things of bee-keeping, and yet I venture the assertion that not half of the 300,000 apiarists of the United States ever pay any attention to the matter. Nothing points more directly toward success than that very thing, and yet it is a point seldom touched upon by the general writer on apiculture. Do you realize what anticipating a flow fully means? It means beginning way back forty to fifty days before you expect that flow, to work for bees, by coaxing the queen to lay just as many eggs as possible, so that the hive may be full to overflowing with bees of just the right age to work to the best advantage, just when the flow begins. Then it means so manipulating that that maximum force of bees will either have their swarming done before the flow commences, or else have no desire to swarm until the flow is over; or better still, have no desire to swarm at all. Then, as Bro. A. says, it means putting on the sections, just at the right time, neither too early nor too late, with the right amount of "bait" sections in each super, on the start. And this section and super part means having all in readiness long before the harvest arrives, so should the season be early or late, all can be supered in a day or two, at the longest. In short, the successful apiarist will begin to anticipate the next season just as soon as the present season has closed. and one of the reasons why so many make a failure at bee-keeping, and many more only a partial success, is because they pay no attention to this matter of anticipating the season, or else do not understand their locality perfectly enough so as to anticipate wisely. If any who read this have not been in the habit of anticipating the season or honey flow, this one item should be of more value to them than the subscription price of the PROGRESS-IVE BEE-KEEPER for fifty years.

[C.]—Did you notice what A. says about swarming at (c)? Allow me to

say that my locality is very little different from what A. describes at (c), three or four weeks previous to the honey harvest, or main honey flow, and the very little part is just this: For fromthree to five weeks previous to our anticipated honey flow, we have just a a very little more boney coming in than a "bare living," enough so that perhaps a gain of 1 to one pound a week is made, and on this stimulus the bees take the swarming fever, so that in usual years, if no precaution is taken, swarming is at its maximum from one to ten days before the harvest arrives, and where nothing is done to prevent after swarming, these are on hand in full force during the honey barvest, so that no surplus is obtained except from the first or prime swarm. With an intelligent preventing of all after-swarms a fairly good yield can be obtained from both the swarm and the parent colony, but where all swarming is prevented, and the bees have no desire to swarm while the harvest is on, almost fabulous results are secured during good seasons. No swarms and such fabulous results, is the problem I am now at work upon, and if I ever reach the coveted goal, I shall tell all how it is, and can be done. It will be noticed that such a light honey flow as I have nearly every year, before the main flow, is said by Bro. A. to upset much of the planning he has given, yet I have found that the unqueening plan will prevent swarming even where such a light flow continues right up to the main flow, but this unqueening must be done long enough in advance of the anticipated main honey flow so that the young queen gets to laying at about the time the main flow commences. If this is done, such a colony will cease its desire to swarm with the hatching of the young queen. What I mean is this: If the old queen is taken away, and a ripe cell given when she is taken away, which should be done about two weeks before the anticipated harvest. if the bees accept the queen hatching from the ripe cell, that moment they give up all idea of swarming for the next 30 to 40 days. If they kill the queen hatching from the ripe cell, they depend on the queen-cells of their own building to furnish them a queen for swarming. In this latter case, on the ninth, tenth or eleventh day from the time of taking away the old queen, according as the weather will permit, all cells are cut and a ripe one is again given. This latter the bees are bound to accept, as they can do nothing else, as with her acceptance, all desire for swarming vanishes, and is a certain thing. After giving the first ripe cell, I do not look at that hive till the ninth day, because, whether the queen is accepted or not, I can do no good, and the ninth day is in time to give another cell, if the first was not taken.

G. M. DOOLITTLE, Borodino, N. Y.



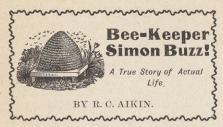
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This story began in the Dec. "Progressive." CHAPTER VII.

It was with regret that Simon must leave the great falls. Twenty-four hours had been allotted to stay there, then the trip must continue down the river by rail to Lewistown; thence to that most moral of all the big cities on this great continent—Toronto, Can.,—going by boat across Lake Ontario. This was Simon's first experience on so great a body of water. He had been on river steamers, ferry boats, and such, but never before on a vessel so far from land.

Simon had been very unfortunate in many things, and thought he was so on this particular morning because he had breakfast. started without when he viewed the many breakfasts that poured over the sides of the boats from both decks, he thought possibly the fact that he was too poor to buy a breakfast was indeed a blessing in disguise. Whether the fact that his stomach was empty was a good thing or not, he could look with perfect peace upon the seasick ones, save for the sympathy felt for suffering humanity.

Now his mind goes back and reviews these scenes, recalls the Brock monument on the towering hill to the left as he passed into the lake, and to the right the place of the old fort guarding the river's mouth, these things suggestive of the days when the people of the United States, then the colonies, fought the mother country to obtain their freedom. The boat upon which he was riding was an historic one, had run the blockade many times in the

war of the rebellion, and made for herself a name.

The great city of Toronto was to be viewed in about three hours' time, and here, too, Simon could not get his fill of viewing the wonderful things. One thing was noticeable here as elsewhere, viz., that men were ever ready to take advantage of others' necessities, to extort money. So limited a time to see the city required a conveyance to be hired, and since there were many people and little time, those getting the privilege of a carriage must pay several times regular fares.

Two incidents were noticeable on the return trip before the party were again on the railway train. Many people upon the boat seemed not to know where they were, pointing to various lands and saying such and such was America and such was Canada. The ridiculousness of the remarks very much amused Simon, because that many times Canada was thought to be the United States and vice versa, and the idea that the United States was America. Surely, thought he, Canada is America, too, both countries being but a part of America.

The other incident was one that caused both merriment and some profanity-it was the customs officers searching the crowd for dutiable articles. Simon, however, had no goods, nor did he admire the idea of waiting on the slow and tedious process, so he passed around by a back way and climbed the river bank and so escaped the annovance of a search. Many other scenes he recalls of the trip, but suffice it to say that he reached his temporary home with friends in good old Ohio. the place of his birth, and like the majority of the whole 500, was dirty, tired and sleepy.

Again, shortly after this, he went to the poor and worn hills in the counties of Guernsey and Perrie, also visited the capital of the state, and from the vicinity of Columbus made his way to his western home in the great Missouri valley. The whole trip had occupied a little over three months, and brought him again to his apiary in time to take off a honey crop in the month of September.

This trip had been undertaken, not because Simon was a restless, roaming innividual, but was to get away from the scenes of so much of his troubles, away into new surroundings, and something to help wear off the keen edge of his mental sufferings, and as well to rest the body. He visited friends and relatives. He studied men and women, art and nature. He was not throwing away money by a lavish expenditure, but on the other hand, was saving at every turn, and making his small store of cash do the most possible. Reader, if you think our friend, Simon, was a spendthrift, view with him those three months of an outing, change, recreation or whatever you may call it, several thousand miles of travel and many places visited, and when you have thought it all over, remember that he neither stole nor begged, but paid his way save what he ate while with friends, and yet less than \$100 was spent in the whole three months.

Simon has been getting some of the rough corners knocked off. He has been in contact with his fellow man in many ways. By association with the world in such a varied manner, and with such opportunities to study of the relations of man to man, scientific, social and political problems, he is beginning to be matured for the accomplishing of some solid work for the advancement of science and morals.

We now find him more than ever following that fascinating pursuit, apiculture. He finds it a pleasure, a science worthy of much effort, elevating and never degrading, and most honorable as a business. It brings him into relationship with life in the insect world; the relationship of the insect to the botanic world, and thereby to study bot-

any; to deal with his fellow man in business while marketing his product, honey; leads him into mechanics: teaches him economy and industry, etc. He learns that the bee has been in history almost from the first records of man. Surely an insect so closely connected with mankind in all ages as to be known in his history, both sacred and profane, is worthy of study in this age of progress.

So it is that we find this man Simon more and more interested in the apicultural science, and we eagerly follow him to see what will be the end. He searches the literature of his day to keep pace with all the latest discoveries and theories. He searches the hive and studies the insect to learn its habits, its uses to the world in general and to mankind in particular. He believes the bee has a future far more glorious than anything it has yet attained to. It will be a benefactor to the human race in many ways.

It fertilizes bloom, and so benefits man by increased crops of fruit. It cross fertilizes and so gives greater variety in fruits. It supplies an article of food that is most excellent. A sweet that enters into many valuable medicines; is used in the manufacture of printers' rollers; in the baker's art, and in the laboratory.

The wax of the bee is a common article in the chemist's necessary outfit; used in lighting; in many articles of wax handiwork; used by dentists; by furniture makers, and many ways in various arts.

The bee is indeed a domestic of no insignificant importance; must and will be in the future as in the past, one of man's allies.

So Simon wonders and admires, and seeing as he does the great importance of the honey bee in the economy of nature, need we be surprised if we find him following it in his scientific research, and as well for a livelihood?

CHAPTER VIII.

Persevering in Apiculture-More Troubles-Financial Distress-Brought to Poverty.

After Simon's second loss of bees that almost extinguished his apiary, he still found great delight in building it up again, and in studying the pursuit as a science. The trait of his father in never knowing when he was whipped, and the steady, calm perseverance of his mother, blended in him so that he was indeed a combination to remain steadfast and persevering. To be beaten at a game when at school. only nerved him to greater energies. To encounter a problem that was very difficult, was but an incentive to greater effort to overcome the obstacle and know the end. He never could be satisfied to do things simply by rule because the rule would bring the result, but he would strive to know the why. Patience and perseverance were always his.

When Simon was about the age of 16 or 17, he chanced to read in an agricultural paper some matter in regard to qualifications of a successful business man, and one of the things the author laid stress upon was to stick to one thing. Scarcely a single business, said the writer, could be made a real success in less than five years, most taking from ten to twenty, and some even a lifetime before success in a high degree could be reached. He who changed every few years would never be noted as a successful man. Simon took this as very good advice, and he now looks back over the many years of pursuit of one special business, and knows that when he took that advice and persevered against odds, he was doing the right thing.

Another thing he read in his early life proved a blessing also: That more great fortunes were gathered by saving the little things than there were accumulated in a rapid or wholesale way.

Relatives and friends undertook to discourage him from his apiarian work on the ground that it was not calculated to bring in money in sufficiently large sums to enable him to accumulate. They argued that he would sell in small lots, and as the money came in "dribs," it would go in the same way, and never would amount to much. To these arguments Simon replied that it was the littles that made the large amounts, and it all depended on saving the nickels, dimes and dollars; that the small tradesman with a place to put the small but many amounts paid in day by day, soon could boast of a snug sum on hand.

See how that persevering disposition stands him in hand. Defeated in his purposes, he seeks the reason therefor, and rises again to meet the foe, having chosen the pursuit of bee culture as a business and a study, though failure after failure meets him as he often tries again.

In his third effort to build up his apiary, he goes at it with a grim determination to win, and as each encounter has taught him wisdom, each new attack is waged with greater intelligence. Definiteness of purpose, a desire to get at the facts, and the why of them, an intense interest in the thing sought aside from the mere money value accrueing from its pursuit, will surely win in no small degree. These qualifications Simon had, and applied them to what he did.

It was so that when his last great loss of bees occurred, the season was one of unusual productiveness. His stock was very limited, but the increase of the apiary for that year was exceptionally large, and the product in honey per colony in excess of anything he had previously had. For several years following, the business was very encouraging, and besides having a nice income from the sale of honey, his apiary came to number about 100 colonies. This is now the third time he had built up an apiary to about the same propor-

tions, but this time not to be swept away by the rigors of winter, as before, but in another way.

It was in the years just prior to this, the time when Simon was in the mining business and thus getting his valuable lessons in general business relations with the world, that the foundation of his next great trouble was laid. In these same dealings with miners on the one side and the patrons of his business on the other, he became entangled in financial troubles. Out of the kindness of his heart he would yield to the persuasions of his patrons and would sell them goods to be paid for at some other date. The employees would ask favors, and receive them. His own father became involved in financial distresses, and Simon helped him. He fell into that most miserable of all financial systems, of both giving and receiving credit, and the whole list of paper business that is the curse of the business world.

The entanglements that are the common outcome of this miserable system, or as Simon now terms it, lack of system, is the giving and taking of notes, and the worst of all, becoming surety for others. All these did fall to the lot of our unfortunate Simon. A certain wise man of old, the wisest perhaps of all time, gave this advice: "He that is surety for a stranger shall smart for it; and he that hateth suretyship is sure." Also in another place he said, "Be not thou one of them that strike hands, or of them that are surety for debts."

But Simon fell into the ways of business as commonly practiced, and trusting others to be as honorable as himself, was soon deep in the entanglements known as financial distress. His troubles were soon that of all those unfortunate in this way; there were many who cared not for others' rights or feelings, but would do many very unfair and unjust things under cover of legal process or otherwise.

Simon surely knew then the truth of Solomon's words about being "surety for a stranger," for he was indeed made to "smart therefor." He had a high sense of honor, and this would not let him cover or protect himself by technicalities or weakness in laws, nor would he take advantage in any way. He pleaded with creditors to give him a chance, and he would slave to pay all. On the other hand he pleaded with debtors to help him by paying to him their just debts. In many cases those in debt to him deliberately defrauded him out of his just claims. Others squandered what they had, some in the brothel and other ways, and so paid not.

Simon, however, oppressed not one of his debtors, never brought one of them into legal process or otherwise distressed them; but he was not to escape so easily. One money shark, a man of wealth and well provided for in this world's goods and needed not help, caused poor Simon much trouble. Taking advantage of his temporary absence on legitimate business in another state, he levied upon some of Simon's goods, to take them upon a false claim.

CHAPTER IX.

A Shrewd Irishman-Again on the Rise-Every Debt Paid.

Were we to review the whole story of that money shark's doing, and all the results of his unjust proceedings, it would of itself make a story equal to this one in extent. Suffice it to say that Simon being at a disadvantage both in money and legal power, was made to suffer financial loss. writer feels it but fair to the reader, however, to say that this shark was indeed a flesh and blood personage and no imaginary man, and that he may yet be following his trade, though if still living is on the very verge of the grave. Let us relate one incident more in which he figured, together with an honest, hard-working son of the "emerald isle."

It so happened that Barney had given a note to the amount of \$100. The note was to fall due in one year from date, and if paid when due, should not draw interest, but if not paid when due, should draw interest from date. Said note fell into the hands of Mr. Money Shark. Upon the day this note came due, the giver of it came into the office of Mr. Shark and complained that he would not be able to pay the note. "That's all right, that's all right," said Mr. Shark, "I do not need the money, and you can just let it run a little longer, if you wish."

Now our friend Barney well knew that if that note became one day older it would demand \$110, instead of \$100, if paid that day, and that Mr. Shark wanted it to get a day older that he might be the ten dollars better off. Barney pleads great distress and urgent need of getting a loan of one hundred dollars. Not only was he not able to pay the old note, but would borrow \$100 more and give another note. Mr. Shark was well pleased to not only add ten dollars to his wealth in the interest on the old note, but was glad to accommodate honest Barney with a hundred dollar loan. A note was made and signed, and the money transferred to Barney's possession, and what did he do but jump up and say, "Mr. Shark, there is no better toime for a mon to pay a note than whin he has the money in his fist I would loike to left that note thot's due today." Thus the Irishoutwitted the shrewd money shark and saved his ten dollars' interest.

So it again fell to the lot of Simon to see what goods he had accumulated pass from his possession, to make up the long list of fees that go to the legal fraternity and officials, (some of them just and some unjust so far as the officials were concerned), and was compelled to sacrifice his property at forced sale. Simon was not the only man in this world of tribulations to suffer in this way. Thousands upon thousands have so suffered. The systems of business that make such things possible are a blot upon our civilization, and the government that winks at the same is far from protecting its citizens against the parasitic part of mankind.

Thus for the third time did Simon lose almost his entire apiary and its belongings, and with it almost everything of this world's goods that were the results of years of toil. Nor was this all: there were yet just debts to honorable creditors that he must pay in the future if ever he could. These more honorable creditors will always be held in kindly remembrance by Simon, because they had for him a kindly fellow feeling and regard, and, had all just claimants shown the same spirit they would have all had every dollar of their claims paid, and paid much sooner than many were.

Dear reader, this is the end of Simon's tale of woe as relates to his social and financial tribulations. His career is by no means at an end, but we have followed him through the terribly bitter school of experience that brought him face to face with the stern realities of life. He has seen that which makes him "suffer with those who suffer": makes him intensely interested in the welfare of his fellow man; opened his eyes to the very many things that are hid from others fully his equals, yes, even his superiors, yet know not the things he knows, taught by a most rigorous master-experience. He has struggled long and hard, and every financial obligation is discharged, and honorably so. We will not detail all the hardships endured while paying these, but will proceed to follow our leader in his progress.

At the time of the third and complete loss, as narrated in the foregoing, our Simon was a man of about thirty years of age. As he now looks back it seems almost impossible that so much could have been crowded into the second fifteen years of his life, but it has better fitted bim for the work he has chosen, and he enters upon it with a zeal that soon puts him upon the upgrade. He has left the old home and gone to new scenes and fields. His energies are bent to rise, not only to former degrees in possession of bees and things apicultural, but he still wills and strives to reach the high ideal that has always dominated him.

He travels from place to place, and finds that each new field opens to him new possibilities and new ideas. He finds that it is literally true that "onehalf of the world does not know how the other half lives." He hears one and another apiarist tell his experiences and beliefs. They tell different stories, and seem not to agree. Others write their experiences, and they are published in books and journals. Just as there are many hives, strains of bees in the hives, differing locations, various systems of management and great and wonderfully varied temperaments in the apiarists themselves, so there seems to be no accord of unity in the conclusions arrived at.

Simon sees all this. He knows that if all these honest hearts and minds could but understand each other and all things that have to do with the theories, systems, etc., pertaining to their pursuit, there would surely be one mind upon all matters. He sees that so long as man is finite and mortal, so long will there be misunderstandings, false theories, and many things to disturb the peace of mind we all would so much desire to obtain. He remembers that there is somewhere in the Bible he loves, the prediction that the time will come when we "shall all see eye to eye in matters of faith and practice." He knows not whether this applies to anything outside of things spiritual, but he hopes to see the day when the science of bee culture shall stand upon

a more stable basis than it does today.

He sees a need of united and intelligent co-operation of wise men in the science, a coming together of leading lights that they may confer together on the many points of differences of opinion, and by conferring and sifting their thoughts, bring to light the true principles.

(To be continued in our next).

Your HONEY! matter where you are. Address, giving description and price.

THOS. C. STANLEY & SON, Fairfield, Ills.

************************** MANAGEMENT and MANIPULATION. S. P. Culley.

Š&&&&&& No. 7.

In November Progressive we gave our ideas of wintering in this latitude, emphasizing the importance of late brood-rearing. wrote this before the fall flow stop-The Spanish needle flow had been strong—unusually so—and we had kept extractors running that queens might have room to lay. The flow stopped very suddenly-we failed to get much late brood started for the first time in years, the second time in our experience. Misfortunes, they say, never come singly. They have not this time to us Our work and health (too much work for our strength) made it impossible to give that personal attention to the apiaries, for which there is no substitute. Result: Losses from all causes, about ten per cent -some robbed out during the very warm weather of October and November; some short of stores sooner than expected—but most of those dead succumbed with stores in the hive; just died with plenty to eat in the pantry, as it were. Many more are greatly weakened—probable loss by spring will be 15 to 20 per cent.

In this locality, a failure to get late reared brood, plenty of young bees when winter comes means heavy winter loss every time, is our experience. Why shouldn't it? Take this year to illustrate: October and November so warm bees were flying like June; December came in cold. The bees reached December old, ready to die. The cold weather came—they died.

And now (Jan. 20) the weather is like spring. We are tempted to start brood. But how risky that would be, because a cold wave might kill the brood, and this seems to so discourage a weak colony that it dies of grief and hopelessness—or "spring dwindling." If we have fine weather through February, and then a cold, backward spring, what nursing the bees will need! A rather gloomy outlook, we confess, but we should report the dark side of our experiences as faithfully as the bright side.

There is a bright side even to losses. With combs in plenty, how rapidly one can restore an apiary when the flowers bloom again. And in our case this time we want to transfer several hundred colonies to Heddon hives. And how easy it will be to transfer empty combs.

The bee-keeper's capital is not in his bees or queens, but in his hives and combs, and, since the advance in lumber, especially in hives. Bees and queens we can produce at will almost when summer comes,

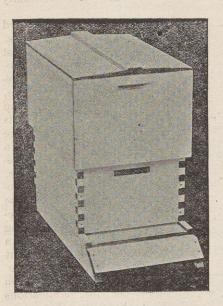
but as things now are adjusted, it takes cash to get hives and combs or foundation. So save your combs and use them. Will report later how many colonies we eventually lost.

We ask permission to say a word for the Progressive Bee-Keeper. Have you ever noticed that, modest and unassuming as it is, the Pro-GRESSIVE is actually giving beekeepers more first-class, high grade, paid-for-in-cold-cash articles than any other bee publication? It is There is less dross and more gold in the Progressive than in any publication we receive. keepers should make note of this, and take pleasure in doing something, each one a little, to increase its circulation and enlarge its usefulness. We are not "running down" others; we are proud of a number of our bee magazines. But what we do know is this: No bee keeper can afford to economize his literature, on the publications he regularly takes. It will pay every bee-keeper in dollars and in fivedollar bills to take and read at least six good bee publications. single idea in a journal is often worth five years' subscription. Support and work for your bee journals. We practice what we preach. We are sending the Progressive to twelve persons at our own expense, and every bee-keeper should help along as he can in the circulation of bee publications. Larger circulation means better magazines, every time.

THE LEAHY TELESCOPE HIVE.

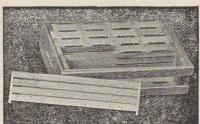
Cut No. 1 represents the Leahy Telescope hive with two supers on and the hood slipped down over them. Cut No. 2 shows hive with hood removed, exposing the two surplus cases to view. Brood chambers to these hives are just the same as the brood chamber to our dovetailed hive, but the supers are glassed on both sides, thus permitting the operator to see what is going on inside of the supers without disturbing the bees in the least. The bottom board of the Telescope hive is a combination of bottom board and hive stand, ornamental, and useful in keeping the hive up from the damp ground. Another combination of this bottom board is the advantage of having a 1-inch entrance as shown in Cut No. 2, or only a \(\frac{8}{2} \) entrance as shown in Cut No. 1. Some beekeepers claim there is a big advantage in a large entrance; others prefer only

a \(\frac{1}{3}\) entrance. In view of these different opinions we have manufactured these bottom boards with two grooves for receiving the floor boards. When nailing up, if you want a large entrance, use the lower groove, but if you want the \(\frac{3}{3}\) smaller entrance, slip the floor boards in the top groove. Later, if you should wish to change from a narrow entrance to a wide one, or vice versa, remove



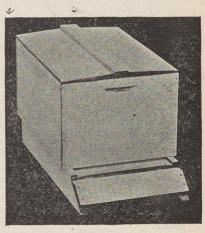


(Cut No. 1)—Leahy's Telescope Hive. (Cut No. 2).—Hive with Hood Removed. the front cleat (which should be put on with screws), slip out these floor boards and slip them back in the other groove. Anyone wishing these bottom boards for the dovetailed bive, can have them by adding 3c to the hive for 8 frame and 5c per hive for 10-frame. We do not manufacture the Telescope hive in 10-frame.



(Cut No. 3).—Telescope Super.

Cut No. 3 shows what we call the Telescope super. They are furnished with our slat separators, and when complete, contain twenty-four I-pound sections, and as two supers can be used to the hive, they give a surplus capacity of forty-eight pounds.



(Cut No. 4).—HIVE PREPARED FOR WINTER

Cut No. 4 shows the Telescope hive, with the hood slipped down, after supers have been removed. There are two inches space between the top of brood

frames and the top of hood. This space in winter can be filled with a cushion of chaff. leaves or sawdust. The telescoping of the hood with the hive makes the hive double-walled around the sides and ends, and with the cushion on top of the frames, it is a splendid hive for outdoor wintering, and a cool hive in summer. This hive is a great favorite in Iowa and Nebraska.

BROKEN COMB HONEY.

Its Merits and Demerits; Manner of Production.—Its Shipment and Demand.

H. H. HYDE.

In the South, especially Texas, the production of this kind of honey is rapidly increasing. Ten years ago this kind of honey was hardly known; now its demand is ahead of the supply.

MANNER OF PRODUCTION.

This kind of honey is produced in frames $5\frac{3}{8}$ deep. They go in the regular Ideal super, which is $5\frac{3}{4}$ deep. It is one and the same super used to hold Ideal $3\frac{5}{8}x5\frac{1}{2}$ sections, only frames are used instead of sections, etc. For the production of this kind of honey, extra thin foundation is used in full sheets.

The management of bees for the production of broken comb honey is one and the same as that used for section honey, only just as soon as bees start to work in the first super a queen excluder is placed between super and brood chamber until the first super is at least two-thirds full, when the excluder is removed. the excluders are not used, some queens will proceed to lay in the first set of frames. After the first is completed, another super can be placed under the first. There is no danger of the queen occupying the second one, as the bees will fill the cells full of honey too fast, that is where full sheets of foundation are used.

ITS SHIPMENT.

When the frames are capped over they are taken off and the honey cut

out and placed in tin cans holding 6, 12 and 60 pounds respectively. The 6 and 12 pound cans have 4-inch screw caps, and the 60 pound have 8-inch screw caps. The width and depth of these frames are such that when the honey is nicely cut and cut just half in two, the two pieces being placed in the 60 pound cans side by side just even fill one layer. The next is placed crosswise of the first, and so on until the cans are full. The cans will hold about 48 and 40 pounds respectively of comb cut out. Extracted honey is now poured on to fill all holes, and to finish up the weight. Now this honey being built on full sheet; of foundation and being left floating or extracted, honey is shipped absolutely with as little loss as is extracted honey, and then, too, it goes at the same rate of freight as extracted honey, and it arrives in just as good shape as when it left the apiary.

ITS DEMAND.

In the South where this kind of honey is known, its demand at present far exceeds the supply, notwithstanding over half of Texas' honey is produced that way. The reason for this demand is, people have been educated to know that this honey is every way equal to section honey, and to them the very important fact that in buying they get full weight and at from 2 to 5c per pound cheaper—these facts cause its sale the to a large number of people who are not able, or feel they are not, to buy section honey, and who also either m do not like extracted honey, or look R upon it with suspicion. The sales sc of this honey have also reached Oklahoma and Indian Territory, and are fast approaching Kansas City and St. Louis, and will eventually be produced by bee-keepers and reach the markets all over the United States. But as a matter of course, section honey will always be produced and there will always be a demand for some among the wealthy, who want the finest looking, and that that costs the most, no matter if it is not one particle better than broken comb from the same source.

ITS MERITS AND DEMERITS.

One of the principal merits of the production of this kind of honey is the fact that at least from half to as much again honey can be produced than with sections.

Again it requires less labor and less skill, although it takes labor and skill to manage bees and pro-

duce any kind of honey.

Then weak colonies do better proportionately than they do in sections, besides going to work in these frames quicker, as they can work to better advantage, but it is not necessary for me to emphasize these points of which all are aware.

There will also be less swarming and loss as is the case of unfinished sections, for all frames not full enough to cut out can be extracted. Again, if at any time the bee-keeper wishes to change to extracted honey, these supers and frames are all right for that purpose, or the super cases to hold sections in place of the frames.

The matter of freight is another important thing, as I have already said. While the cans to hold this honey cost more than other cans, yet when we consider higher freight, the cost of sections and shipping cases, it about balances.

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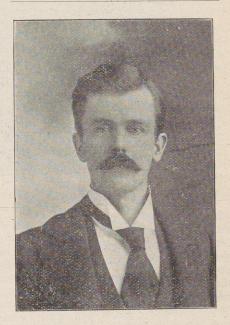
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I am proud to say that the demerits of this kind of honey are few. By far the greatest, (and it can scarcely be classed as such) is the

fact that people will have to be educated to its use, as they have been in Texas, and this is not a hard job, as the bee-keepers of this state commenced its production only at the urgent demand of the consumers; but they have since learned that it is more profitable to produce than either section honey or extracted honey. It has a slight demerit in that like extracted honey it will candy in cool weather. Yet it cannot be liquified again without destroying the combs. But people soon get used to this, and prefer it in the candied form, as they know it is pure. This is a good way of teaching people that all pure honey will candy.

Hutto, Tex.

ONE OF KANSAS' PROMINENT BEE-KEEPERS AND SUPPLY DEALERS.



E. W. DUNHAM, Manager of Topeka Bee-Supply-House

Kansas is fast becoming one of the principal honey-producing states of the union. Much of its territory is especially adapted to the growing of alfalfa clover, and there are many bee-keepers now in Kansas who count their colonies by the hundreds, among some of the most prominent of which is E. W. Dunham, of Topeka, Kas., whose portrait heads this introductory.

Mr. Dunham is a true Kansan, and like everything else that is rear-

with Mr. Dunham and his estimable family, his good wife and iittle Wayland Dunham, a bright fellow, who is about a year old.

Little Wayland is starting out right, for the accompanying cut here shows him auctioneering off honey, for the bee-keeper now-adays who cannot successfully sell his product does not receive the full benefit of his labor, that is, he must



LITTLE WAYLAND DUNHAM SELLING HONEY AT AUCTION.

ed within the borders of this enterprising state, has imbibed the push and energy which bring to the Kansas people success. Mr. Dunham is a bee-keeper of considerable proportions, and has two or three outapiaries, in addition to his home apiary of 90 colonies, which are pictures of neatness and beauty. On one of my recent rambles through Kansas, I spent a very pleasant day

be not only a producer but a salesman as well.

Besides being an extensive beekeeper, Mr. Dunham is also an extensive supply dealer, having handled three carloads of supplies the past season. He considers the Higginsville supplies the best on the market, and has recently ordered his first car for his company for 1900.

Mr. Dunham is also a photographer of considerable merit, and we have the promise of some of his snap-shots, which we propose to produce within the Progressive columns from time to time.

The Use of Sweet Clover.

In an address on soil renovation by Dr. H. J. Waters, dean of the Moagri college, it was said that the common sweet clover is not the pernicious, dangerous weed so many seem to think. It can be easily cleaned out by mowing twice a year for two years, he said, and it is one of the most valuable soil renovators known. It will grow and thrive on land too poor to grow clover or cowpeas, and it is especially suited to build up the millions of acres of flinty hills that are now absolutely waste, growing up in brush. Experiments made at Columbia show that in this quality of soil sweet clover is more valuable than ordinary clover. After a few years of sweet clover, such soil is built up to a point where it will grow other renovators. In such lands it can be easily seeded and will smother other weeds, and in addition it will furnish as a by-product large quantities of honey.-Farmers' Tribune.

OUR LETTER BOX

Good Wishes, Etc.

Yours of recent date, with its Christmas generosity, at hand. Allow me to express my appreciation of the same. Coming as it does from the editor of my favorite journal, makes me feel that there is a warmer friendship existing even than I thought. The PROGRESSIVE has been a favorite of mine ever since I first knew it. Its editors and contributors have become through their writings favorite and intimate friends. R. B., dear editor, your articles of travel have endeared you to the

hearts of your readers. From them we caught some of the real sunshine from a noble heart, and this same sunshine of love and good will has beamed from the pens of many of the PROGRESSIVE contributors. Then there is "Experiience and Its Lessons," and "Recapitulation," that are worth many times the subscription price of the paper. They are not only valuable aids to our fascinating pursuit, showing how the dollars and cents may be multiplied, but they are brimming full of thoughts that are calculated to better and ennoble the mind and lead to a higher and nobler life, a higher and more loyal citizenship. I havn't the time to speak of all the good things of the past year, but I must not fail to mention the prize stories. They are good; full of interest from beginning to end. The writers deserve a compliment. Although "Simon Buzz" is not completed yet, we know enough of the author to await anxiously for the good things in store for us in the next issue. Don't think I am trying to flatter. I am just speaking what I feel, and taking the privilege to write the same. Yes, I will try to send you a few items now and then for publication, yet I believe some other could fill the space with more interesting matter. I hope you may live many years to do good in, and I hope you will be able to see the fruits of your labors. Wishing you a happy and prosperous year, I am yours very respectfully, MARK E. DARBY.

Springfield, Mo.

Likes the "Progressive."

Enclosed find fifty cents to continue my subscription to the PROGRESSIVE, as I don't want to miss a single number. The PROGRESSIVE has been a great help to me. I commenced keeping bees about four years ago, by buying one colony in an old-fashioned box hive. I bought some more last year and subscribed for the PROGRESSIVE. By studyin my journal, I have suc-

ceeded well. I now have ten colonies in prime condition. I find a good bee journal is good literature, whether one keeps bees or not. "Our First Bees," Jan. 1, 1899, PROGRESSIVE, fits my case better than anything I have seen. I keep all my journals for reference, and prize them very highly. I wish a prosperous year to the PROGRESSIVE and its many readers. J. R. Scott.

Broadway, Tex.

The Best Bee-Paper.

I like your paper. It is the best bee paper, for the money, that I know of.
Gaines, Mich. M. V. JEWELL.

Best of All.

I have taken the PROGRESSIVE for a year, and I find it best of all that I have ever taken. All the people I have shown it to like it. I herewith send 50c for another year. THOMAS CRISPIN.

Rardin, Ills.

From California.

Having been away from home for some months, having left my apiary in charge of my brother, I was not aware that you had continued to send the PROGRESSIVE. I enclose 50c for another year. I have missed your journal very much, and now think I cannot do without it.

GEO. W. MOORE.

Paicines, Cal.

An Old Subscriber.

In December Progressive you ask all old subscribers to renew. I think it was in 1892 I commenced taking the Progressive. My subscription is paid to June, 1900. Here is my report:

My PROGRESSIVE queen built up from 2-frame brood and bees, and gave me 60 lbs. of comb honey. Yours,

Mt. Vernon, Ind. ALF. E. SMITH.

Bees for Sale. Toward bas

Two hundred colonies at \$3 each. Eight-frame dovetailed hives, two supers each, with fence separators complete. Good location, no failures and no disease.......

W. C. Gathright, Dona Ana, N. M.

EDITORIAL.

The Progressive Bee-Keeper.

A journal devoted to Bees, Honey and Kindred Industries.

TERMS: Fifty cents per year, in advance.

R. B. LEAHY, G. M. DOOLITTLE, \ - - Editors

We have added 150 bran new subscribers to the PROGRESSIVE list this month.

FROM reports coming in, bees are wintering well all through the west and south, and bee-keepers in this state and Texas are much encouraged with the prospects for a big honey crop.

We have much good matter left over that we were unable to get in this time, among which are two excellent articles, one from Dr. C. C. Miller and one from the Hon. Geo. W. Williams.

OUR Telescope bee hive is becoming quite popular, being a cool hive for summer and a warm hive in winter. We have been asked several times to give an up-to-date description of it. Such a description will be found on pages 60-62.

AMONG the heavy press of catalog work this month, the extra pages and the large edition of the PROGRESSIVE this time, we are much behind, but we think our subscribers will forgive us when they read the amount of good matter we have been able to give them in this issue.

THE past month nearly all of our old subscribers renewed. Hooray for our side! Many paid up their back dues, and renewed. Many more paid up, but didn't—renew. Now we still have a few more on our list that we wish would pay up and renew. We are giving you as good a bee journal as we know how, and if you cannot pay up and renew your subscription, then please pay up and—

IF you get more than one copy of this number of the PROGRESSIVE, hand it to your bee-keeping friend and ask him to subscribe. Thank you, in advance.

THE PROGRESSIVE BEE-KEEPER for one year and a warranted, golden Italian queen in June, both for one dollar. The queen alone is worth \$1. Subscribe for the PROGRESSIVE at once, and save fifty cents. See?

WE have made arrangements by which the subscribers to the Western Bee-Keeper will receive the PROGRESSIVE for their unexpired subscriptions to that journal. We hope you will like the PROGRESSIVE, and we take this opportunity in advance to ask you, when your subscription expires, to kindly renew.

Among some of the catalogs and price lists we have printed of late, are a lot for J. D. Givens, Lisbon, Tex., Albino queens; 3,500 20-page catalogs for Barteldes & Co., dealers in apiarian supplies, Denver, Colo. The advertisements of these parties will be found elsewhere in our columns. One thousand catalogs for C. E. Walker, apiarian supplies; about 3,000 for each of our branch houses, and 10,000 for ourselves here. The paper used to print this issue of the PROGRESSIVE and the above-named catalogs has amounted to about 5,000 pounds, and for the next three months we will use about as much more each month, making a round lot of a car-load.

From the report of the Colorado State Bee-Keepers' Association, recent-

ly held at Denver, Colo., we notice that end-spacing staples for brood frames got the black eye, or to put it stronger, two black eyes, as the members present seemed to be almost unanimously opposed to "such fixin's." We have not found them popular among our customers, and from recent letters received have concluded that the sooner we go back to our "first love," the long top bars, the more friends we will have among bee-keepers. Why our Friend Williams came seventy miles on a night train to Higginsville, with the intention of cleaning up the whole establishment here, because we had shipped him some of the short top bar frames with end-spacing staples. By us promising we would do so no more, he concluded to let us off that time. And Mr. Flanagan said he would rather go out of the business than to use such "monkey fixin's." We think in future it will be better to send staple spaced frames only to those who ask for them.

TWO LOVERS.

A dewdrop loved a violet,
Afflanced to a bee;
And from afar it worshipped, yet
No dream of it had she.
When day's majestic beauty shone,
The bee devotion paid;
But when the night assumed his throne
The dewdrop sought the glade.
What time the misty stars were out,
He lingered near his love,
And fragrant zephyrs breathed about
As soft as seas above.
The while the bee his visits made
In rose and lily bowers,
And firted through the lovely glade
With half a hundred flowers.
When from her face the bee had sipped
The glowing bloom away,

He saw a pansy fairer lipped,
And left her to decay.
The dewdrop found her pale and dead,
Ah, me! his love was best,
For while the bee the pansy wed,
He died upon her breast.

-Will Ward Mitchell.

Wanted.

Alsike clover seed and Japanese buckwheat. If you have any to sell, write to us. Address,

Leahy Mfg. Co., Higginsville. Mo.

Bees, Queens and Nuclei.

Having disposed of my Supply Business I am able to give more time to my bee business, and can promptly fill all orders for Queens, bees by the pound, nuclei, and full colonies. Send for my price list, and see my prices, and what pleased customers have to say about my Bees and Queens.

E. T. FLANAGAN,

Lock Box 114, St. Clair Co., Belleville, Ills.

QUEEN BEES.

	1.1	6	12
Untested-Jun., July, Aug. and Sept.			\$ 8 00
All other months	1 00		9 00
Tested Queens	1 50	8 00	15 00

My queen are all bred from selected stock, and are bred for beauty and business.

Address, G. F. DAVIDSON,

Wilson Co.

Fairview, Tex.

Albino Queens.

If you want the most prolific queens, the best honey gatherers, the best comb builders, and the hardiest bees known, try my Albinos. Untested Queens, \$1.00.

J. D. GIVENS, Lisbon, Tex.

Western Apiarists.....

will save time and money by buying their.....

* SUPPLIES *

..from ..

Barteldes & Co. Denver, Colo.

We make a specialty of Leaby Mfg. Co.'s products.

26

New 23-page descriptive price-list free.

MANY IMPROVEMENTS THIS YEAR.



We have made many improvements this year in the manufacture of bee supplies. The following are some of them: Our hives are made of one grade better lumber than heretofore, and all that are sent out under our new prices, will be supplied with separators and nails. The Telescope hive has a new bottom board, which is a combination of hive stand and bottom board, and is supplied with slatted tinned separators. The Higginsville Smoker is much improved, is larger than heretofore, and better material is used all through. Our Latest Process Foundation has no equal, and our highly polished sections are superb indeed. Send 5c for sample copy of these two articles, and be convinced. The Daisy Foundation Fastener—well, it is a daisy now, sure enough, with a pocket to catch the dripping wax, and a treadle so it can be worked by the foot. Prices as low as conservative, considering the big advance in raw material. If you have not received our new catalogue, send for it at once. Sample copy of the Progressive Bee-Keeper free. Address,

LEAHY MFG. CO., Higginsville, Mo. East St. Louis, Ills. Omaha, Neb.

BEES AND QUEENS

Three Apiaries—Three Races.

Either Golden Italians, 3-Band Italians
or Holy Lands.

We secured our stock regardless of cost,
Rear queens by the best known methods.
Queen rearing is our specialty. We
have been at it for years. Our Mr.
H. H. Hyde will have charge of
this department.

We want the address of every bee-keeper for our queen circular, which gives prices on bees and queens, besides valuable information on queen rearing, swarming, etc. We are also headquarters for Root's supplies for the Southwest.

Prices, either race, for June, July, August and September—Untested queens, each 75 cts, 6 for \$4.25; tested queens, each \$1.25, 6 for \$6.75. All other months—Untested \$1 each or 6 for \$5.00; tested queens, \$1 50 or 6 for \$8.00. Discounts for quanties. Select tested and breeding queens a specialty.

O. P HYDE & SON, Hutto, Tex.

SPENCERIAN PENS WRITE WELL WEAR LONG ALWAYS USED Samples sent on receipt of return postage—2 cents, SPENCERIAN SPENCERIAN

HAVE YOU SEEN IT? WHAT?

Why, the Weekly American Bee Journal?

Send your name and address for 3 free sample copies, all late and different issues. Mention Progressive Bee-Keeper. Address.

GEO. W. YORK & CO., 118 Michigan St., Chicago, Ills.

NOW

is the time to subscribe for the Progressive

ONLY 50C A YEAR.

Kansas Bee-Keepers:

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We have a carload of "Higginsville" Supplies, at manufacturer's prices,

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and are prepared to fill orders promptly, and can save you freight.

♦♦♦♦

Send all orders to

## TOPEKA BEE SUPPLY HOUSE,

E. W. DUNHAM, Manager

1061 West 5th St.,

Topeka, Kansas

Catalogue free.

# WANTED

Every reader of this paper to send 25 cents for one year's subscription to the

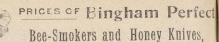
## Western Florist & Fruit Grower.

We are going to give away absolutely free a

## Lady's 16-Jewel Gold Watch

Send for a sample copy for particulars. Address

L. H. COBB & CO Perry, Okla.



| moke Engine   | largest smok-<br>er made. | 4 inch | stove \$ | r-doz.<br>13.(0—M | each<br>Iail, \$1.50 |
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| Dogton        |                           | 21/ ** | 1.4      | 9 (:0             | 1.10                 |
| Condminon     |                           | 9 66   | **       | 6.50-             | 1-(10)               |
|               |                           |        |          |                   |                      |
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| All Bingha    | m Smokers are             | stampe | d on the | metal.            | patented             |

The four larger sizes have extra wide shields and double coiled steel wire handles. These SHIELDS and HANDLES are an AMAZING COMFORT—always cool and clean. No more sutty nor burnt fingers. The Plain and Little Wonder have narrow shields and wire handles. All Bingham Smokers have all the new improvements, viz: Direct Draft. Movable Bent Cap. Wire Handles. Inverted Bellows, and are ABSOLUTELY PERFECT PERFECT.

Fifteen years for a dollar. One-half a cent a month.

Cuba, Kansas, Jan. 27th, 1897.

Dear Sir.—I have used the Conquerer 15 years. I was always well pleased with its workings, but thinking I would need a new one this summer I write dor circular. I do not think the four inch "Smoke Engine" too large, Yours.

W. H. FAGERTY.

Corning, Cal., July 14th, 1896. I have used Bingham Smokers ever since they first came out. Working from three I seven hundred colonies twelve months in the year. I ought to know what is required a smoker The Doctor 3½ inch just received fills the bill. Respectfully, O. W. OSBOR.

Mt. Pleasant, Mich., Aug. 7th, 1886.

Dear Sir—Smokers came O. K. They are the best I have ever seen; sell like hot cake
Respectfully, Wm. BAMBU

with a Bingham Smoker that will hold a quart of sound maple wood, the bee-keeper trials are all over for a long time. Who ever heard of a Bingham Smoker that was too larg or did not give perfect satisfaction. The world's most scientific and largest comb hone producers use Bingham Smokers and Knives. The same is true of the world's largest on ucers of extracted honey. Before buying a smoker or knife hunt up its record and pedigre

Please mention the 'Progressive.'

T. F. BINGHAM, Farwell, Mich



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to make up clubs for

## HOME AND FARM.

the brightest, biggest and best paper for the household and farm. Send for sample copies and Premium List, showing the attractive premium and cash commission offers. Subscriptions easily taken where the paper is introduced. Address, .....

> HOME AND FARM. LOUISVILLE, KY.

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# FORTY PICTURES!



The editor of the Bee-Keepers' Review, in July last, spent nearly three weeks with note-book and camera among the bee-keepers and supply-manufacturers of Wisconsin. bringing home with him many items of interest and value, and about forty views of aplaries, hives, factories, etc., all of which will eventually find their way into the Review. Arrangements have also been made with some of the best bee-keepers of Wisconsin to describe in the Review, before the opening of another season, the methods whereby they have been so successful.



# Back Numbers Free.



I have found it profitable in the end, to make some extra offer in order that bee-keepers may be induced to subscribe for the Review, and thus become acquainted with its merits As such an inducement, nothing has given better satisfaction than the offer of back num bers of the Review. Back numbers of the Review are different from those of newspapers and some journals? The information that they contain is just as valuable now as when first published. Each issue of the Review, especially if devoted to the discussion of some special topic as is the case with all of the copies printed during the first five or six years of its existence, is really a little pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Some issues are now out of print; of others only a few remain; while of others there is still a good stock upon hand. Instead of letting these back numbers lie on my shelves gathering dust year after year, I think it better to use them in getting new subscribers, and, at the same time, have them out doing good. I shall, therefore, as long as these back numbers hold out, send 12 of them free to each one who sends me \$1.00 for the Review for 1900. Not only this, but all subscribers for 1900 will get the Review the rest of this year free. The selection of these back numbers must be left with me; but I will see to it that no two are alike. To be sure that I am understood, let me tell it again: Send me \$1.00, and I will send you twelve back numbers of the Re view, then the Review for the rest of this year, and for all of next year.



W. Z. HUTCHINSON, Flint, Michigan.

# WE MAKE A .... SECTIONS,

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Being located in the great BASSWOOD timber belt of Wisconsin; admitted by all to be the best for making sections.

A GENERAL LINE OF BEE-KEEPERS' SUPPLIES,

In stock, and at prices with the times. Write for Catalogue and prices, Free.

MARSHFIELD MFG. CO., MARSHFIELD, WISCONSIN.

Please mention the "Progressive in answering this advertisement.

TEN YEARS OLD!

That was the ge of

THE AMERICAN BEE-KEEPER,

on January 1st, 1900. It is now under the editorial charge of Mr. H. E. Hill, and is regarded as strictly up to date. Send for a sample copy, and we are sure you will subscribe (50 cents a year). Also get our catalog of Bee Supples, free. Our prices are low, and our goods are the best.

Address,

THE W. T. FALCONER MFG. CO., Jamestown, N. Y.

J. W. Rouse & Co., Mexico, Mo

Apiarian Supplies, Bees and Queens.

THE MODEL COOP.





RAT, CAT AND VARMINT PROOF.

One nailed, and five packed inside, making six coops; (ship at low rates. Price, §3.50.

Illustrated circular free.

Latest Improved Hives,
Sections Comb Foundation.
Smokers, Bee Veils, and all
kind of supplies, at low
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A beautiful 28-page catalog. free.

The "Amateur Bee-Keeper," an 80-page book for beginners; fully illustrated. By mail, 25 cts.

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